

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number  
WO 03/079638 A1

(51) International Patent Classification<sup>7</sup>: H04L 29/06

(21) International Application Number: PCT/US03/07178

(22) International Filing Date: 11 March 2003 (11.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/363,589 12 March 2002 (12.03.2002) US  
60/445,264 5 February 2003 (05.02.2003) US

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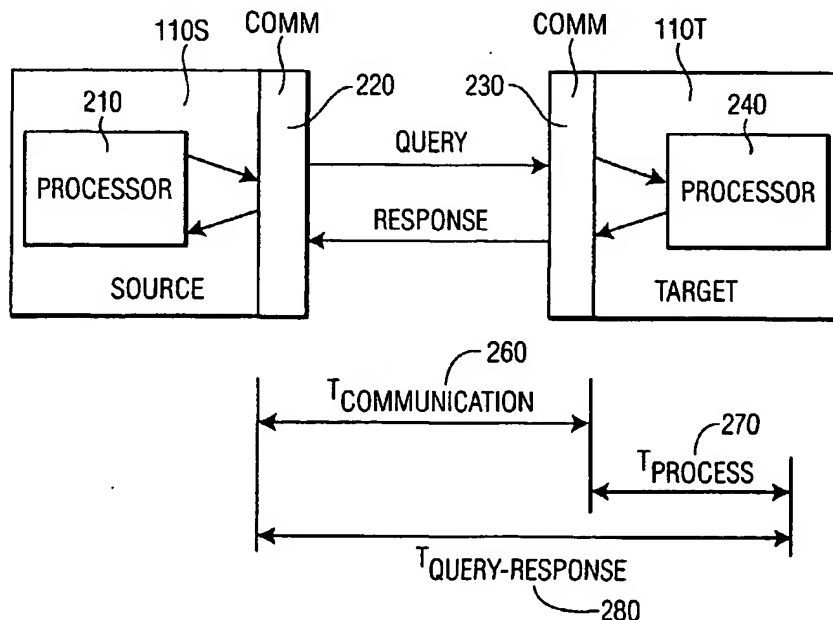
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(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: USING TIMING SIGNALS TO DETERMINE PROXIMITY BETWEEN TWO NODES



(57) Abstract: A system and method facilitates a determination of proximity between nodes based on the communication time between the node. A source node communicates a query, or "ping", to a target node. The target node is configured to automatically send a response to the sender of such a query. The communication time is determined based on the time duration between the transmission of the query and receipt of the response at the source node. The communication time is compared to a threshold value to determine whether the target node is local or remote relative to the source node.

**Declarations under Rule 4.17:**

- as to the identity of the inventor (Rule 4.17(i)) for all designations
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

**Published:**

- with international search report

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# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 03/07178

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	STEVENS ET AL: "TCP/IP ILLUSTRATED, Vol. 1. THE PROTOCOLS", TCP/IP ILLUSTRATED. VOL. 1: THE PROTOCOLS, PROFESSIONAL COMPUTING SERIES, READING, MA: ADDISON WESLEY, US, VOL. VOL. 1, PAGE(S) 85-96 XPO02106390 ISBN: 0-201-63346-9 page 85 -page 87	1-10
Y	US 2002/016831 A1 (BARATZ ARIK ET AL) 7 February 2002 (2002-02-07) abstract paragraphs '0002!', '0004!', '0019!'-'0026!', '0062!'-'0065!', '0110!'-'0112!', '0206!', '0210!' -/--	1, 2, 5-7, 10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*Z\* document member of the same patent family

Date of the actual completion of the international search

6 June 2003

Date of mailing of the international search report

13/06/2003

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# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/US 03/07178

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 308 273 B1 (SHAH BHARAT ET AL) 23 October 2001 (2001-10-23) abstract; figure 3 column 1, line 1-17, 55-63 column 5, line 12-50 ----	3, 4, 8, 9
P, X	US 2003/046022 A1 (SILVERMAN ROBERT M) 6 March 2003 (2003-03-06) abstract paragraphs '0002!', '0005!', '0008!', '0023!; claims 1-3 ----	1-10
P, X	US 2002/087666 A1 (HUFFMAN STEPHEN MARK ET AL) 4 July 2002 (2002-07-04) abstract paragraphs '0001!-'0003!', '0008!', '0034!', '0036! claim 1 ----	1, 5, 6, 10
P, X	US 6 505 240 B1 (BLUMENAU TREVOR I) 7 January 2003 (2003-01-07) abstract column 1, line 6-16 column 10, line 25-46 column 11, line 25-47 ----	1, 5, 6, 10
A	FRANCIS P ET AL: "An architecture for a global Internet host distance estimation service" INFOCOM '99. EIGHTEENTH ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. PROCEEDINGS. IEEE NEW YORK, NY, USA 21-25 MARCH 1999, PISCATAWAY, NJ, USA, IEEE, US, 21 March 1999 (1999-03-21), pages 210-217, XP010323734 ISBN: 0-7803-5417-6 page 210 -----	1, 5, 6, 10

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Information on patent family members

International Application No

PCT/US 03/07178

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US 6308273	B1	23-10-2001	EP 1095493 A1 02-05-2001 JP 2002518720 T 25-06-2002 WO 9965207 A1 16-12-1999
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